

**A METHOD AND SYSTEM FOR CORRECTING WEB DEFORMATION
DURING A ROLL-TO-ROLL PROCESS**

ABSTRACT

The present invention includes a method and system for correcting web deformation during a roll-to-roll process. The present invention includes controllable mechanical components that are capable of dynamically adjusting the planarity of the web during the roll-to-roll process. By adjusting the web during the roll-to-roll process, the accuracy of the layer-to layer alignment of successive patterning steps is greatly increased thereby enabling the production of electronic structures with lower overlap capacitance and higher resolution. A first aspect of the present invention is a method for correcting web deformation during a roll-to-roll process. The method includes initiating a roll-to-roll process involving a flexible web substrate, detecting deformation in the flexible web substrate during the roll-to-roll process and dynamically aligning the flexible web substrate based on the detected deformation.

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